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ORIGINAL ARTICLES.

Bacteriological Diagnosis.

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Read before the East Kansas Medical Society, Kansas City, Kas., April 20, 1897.

Mr. President and gentlemen: The object of this paper is to present to the conscientious physician and surgeon a few facts which will stimulate such a practitioner to verify and establish a diagnosis in the obscure cases to which he is so often summoned.

I think there are none of us, but that have encountered such difficulties, irrespective of our supposed capability to penetrate the myteries of disease by the symptomatic process; and especially does this proposition hold good in the earlier stages of pathological conditions.

A very potent example of this principle is that of the various phases of malaria, the entity of which may no longer be doubted as due to a micro-organism which does not occur in other uncomplicated diseases, but which does occur in diseases in which malaria is the complication. Hence the treatment of our cases in their earlier stages, will depend upon an intimate knowledge of the pathological conditions then and there existing.

I have no hesitancy in saying that the microscope will reveal these conditions, and believe it is due our patients and our own reputations, to employ this means of early diagnosis, in order to relieve the patient's disease and thoroughly satisfy our own minds as to the correctness or incorrectness of our decision in the premises, both as to the disease in question and as to the propriety of following or changing the line of treatment already mapped out.

Let us consider for a few moments the testimony which establishes the diagnosis of malaria by the aid of the microscope.

It is no difficult task to demonstrate, that the blood of patients suffering from the various forms of malarial fever contains the micro-organism known as "Laveran's plasmodium malariæ." Seventeen years have elapsed since Laveran discovered this organism, and during that time the subject has been continually worked upon, and a vast mass of literature has accumulated devoted entirely to it, and the concensus of opinion has centered upon this statement: That the diagnosis of the malarial fevers can be made with certainty by the blood examination. All that is needed by any one to make such an examination, is a good microscope, knowledge of the technique involved and proper preliminary training. To discover the parasite is not so difficult as some writers would have you believe, providing it be searched for in the proper manner.

As to the frequency of its occurrence, it may be said to be always present in active malarial disease.

It is best discovered about the end of apyrexia, and the beginning of the fever, when they show the characteristic pigmentation and they are large. They are, however, most numerous *during the fever*, but are so small that they are apt to be overlooked by the beginner.

The blood can be examined fresh, or stain-

ing methods may be used. I have found the examination of fresh blood to be most satisfactory for diagnostic purposes, inasmuch as the organism can then be studied in its *living* condition.

The disadvantage of this method being, that to properly demonstrate its presence the specimen should be examined within two hours from time of obtaining it.

If, however, it is impracticable to have a competent microscopist come to the bedside of your patient, you may, by letter, obtain the necessary slides, cover-glasses and stains, together with the proper direction for mounting a specimen of the blood, which may then be sent to him for examination and report. Specimens so prepared will maintain their identity for an indefinite period.

I presume there is no disease which should be so early diagnosed in order to give your patient the greatest amount of benefit from medical treatment, as is that of tuberculosis; and I know of no *means*, where positive diagnostic results are obtained, before the disease has progressed to a stage in which tissue metamorphosis is so pronounced, that the disease resists all means employed to conteract the same,—I say, I know of no means except the *early* microscopical examination for the pathognomouic tubercle bacilli, which, when the disease does exist, may be discovered in one, two or three researches of the sputum, where the lungs are affected, and of the exudate where other tissues are involved. In surgical work, the identification of a tubercular process existing, is very important in determining the advisability of, or contraindications to operating.

The clinical signs in the vast majority of cases being inadequate to a just decision, disappointment usually following such cases where the pathological process depends on tubercular invasion. The microscope alone furnishes us with the indisputable fact of its presence or absence and of determining the prognosis of the case, whether operation for relief is advisable or not, and particularly defining the extent of the operation necessary to remove all the affected areas, thereby lessening the tendency to recurrence of the same.

It is perfectly safe to say, that there is no secretion nor excretion of the human body, whether it be a physiological or a pathological variety, but that will reveal, with the aid of the microscope, the character of disease-processes which exist within the organ or tissues from which the specimen is obtained, or indicate to the observer pathological changes which are occurring in other structures of the body whose influence has great bearing upon the proper functions of the tissues or organs to which they come in contact, or upon which they are dependent for the proper physiological processes.

Many complications, with which we so often meet in the course of disease, could be avoided by the timely discovery of the causes upon which these complications depend. Allow the microscope to disclose the presence of the "plasmodium malariæ" in your obscure cases which resist the treatment you are employing, and by a vigorous anti-malarial therapy, you will be able to prevent a phagadenic splenic complication, or a pernicious anemia caused by the destruction of the red blood corpuscle, upon which this micro-organism depends for its existence while within the body.

Permit the bacteriologist to ascertain the fact of the presence or absence of the pus-producing germs in the exudate following your amputation or simple incision, and many of those annoying and disasterous sequelæ will be prevented by the proper application of more vigorous antiseptic precautions, and we will be the sooner relieved of that atrocious synonym—"*laudable pus*," from which, I have no doubt our martyred president succumbed.

In my opinion, the only thing "laudable" about pus is its absence, and when pus does exist, the means whereby it is dispensed with, is laudable employment.

If pus-germs pre-exist in the tissues, the fact should be asertained, and the necessary precautions employed to prevent their propogation after their seat of propagation has been exposed.

Destroy the pabulum upon which all bacteria thrive and they will become extinct themselves. Upon this theory rests the history of all self-limited diseases.

An uncomplicated case of typhoid fever ceases when the food upon which the bacilli thrive has become deprived of the materials necessary for their development.

Substantiate the presence of the typhoid bacillus as early as possible, and apply eliminative therapy, and your cases will present a milder history.

This is *the* progressive age of medicine and surgery, and every means, legitimate in their nature, should be encouraged by the physician and surgeon to further the exactness of his methods, in ascertaining to a certainty, the presence or absence of a malignant tendency to pathological growths in their earlier stages; the invasion of pathogenic micro-organisms before they have produced serious complications; the effect being produced by your line of treatment, as evidenced in the change in the character of the secretions and excretions; the tendency to metastasis and invasion of new territory should be substantiated, and any other circumstance in your cases which is not clearly demonstrable by the physical signs or chain of symptoms, the microscopist, pathologist and bacteriologist, *the product of this progressive age*, awaits your progressive spirit, to aid you in making the science of diagnosis as near exact as is possible, and as a matter of course the art of therapy much more convincing.

It should be the province of medical men to encourage the establishment, at least in all the larger cities and towns, of laboratories, for the minute examination of all food and water supplies, the source of so many forms of disease in which uncleanliness and contamination, together with the ignorance of the laity, causes the extension of those virulent varieties of diseases, which prevention alone, as yet, seems to be the cure.

As to the importance of the bacteriologist and microscopist in the practical life of the physician and surgeon, I could quote numerous instances in which, by his assistance, the physician or surgeon in charge has materially aided his patient and his own reputation; but I have no doubt that there are those present who will add their testimony, and express their satisfaction with the results obtained by this aid, and thereby stimulate the profession to the most thorough research in the mysterious but positive field of bacteriology.

Report of Case of Eczema of the External Auditory Canal.

BY J. W. MAY, M.D., KANSAS CITY, KAS.

Read before the East Kansas Medical Society, Kansas City, Kas., April 20, 1897.

Mrs. L. C. B. age 64, called at my office to consult me concerning her ears, saying that there was an intolerable itching to such a degree that she was nearly worn out for want of sleep, this condition having been present during the past two years. She complained also of being very hard of hearing. Upon examination find she can hear watch only when in contact with ear. Inspection showed a slight redness and dry, scaly condition at the external meatus — no other abnormal manifestations of the skin of other parts of the body. She was quite weak, very nervous, irritable and the subject of chronic bronchitis. Pulse 85, weak and compressible. Examination of the urine showed it to be normal; bowels constipated; appetite poor. Examination of the external auditory canals showed a dry and scaly condition from the external meatus to the tympanic membrane. Tympanic membrane dry and lusterless, but perhaps not more so than we frequently observe in old people. Upon removing the scales and scabs from the canal it was red, and in places there was an oozing of serum from the inflamed, thickened integument. I might say that she had been treated by various physicians during the past two years, with no abatement of the trouble, and as a matter of course consulted me with the same misgivings that it would be futile as to relief. This being the case I was ex-

tremely cautious as to getting at the foundation of the trouble, by giving her a searching examination. The urine not giving any evidence we abandoned that idea, and looking the case over carefully, nothing to account for this most intractable lesion, except perhaps the weakened condition of the system from age and this chronic bronchitis. However the case must be relieved if possible, and without further delay we proceeded to the treatment.

Began by prescribing:

℞ Acid phos. dil. ℥iv.
Tr. ferri per chlor. ℥ii.
Syr. limonis q.s. ℥iii.

M. Sig: Teaspoonful in wine glass of water after meals.

Aloin Comp. pills 1-10 gr. night and morning to relieve the constipation. Now comes my hobby for exzema, a recipe that I learned to use when in general practice, and it seldom failed me.

℞ Acid carb. pur. grs. xx.
Ung. zinc. ox. benz. ℥i.

M. Sig: Apply.

Began the local treatment by cleansing the ears of all debris with this ointmeut with cotton on the applicator. After thoroughly cleansing by wiping with the cotton and ung. then make a free application of the same ointment, and the case is done till next day. No fluids, soap or water, must be used as it nearly always proves deleterious as this patient found. She went home, reported next day that she had a splendid night's rest and was feeling much encouraged. Gave the same treatment every day for nearly a month, and after that two or three times a week for two months with complete relief. The itching ceased from the first, and I regarded this as an important matter as it is impossible to avoid rubbing or scratching the parts which aggravate and keep up the trouble. She was supplied with some of the ointment to apply when any itching was felt. The carb. acid may be varied of course to meet the indications. Hearing improved so that it was 8-39 L. 10-39 R. Four months, and no return of trouble.

The Value of Camphoric Acid in the Treatment of Night Sweats.

H. A. Hare, M.D., in Therapeutic Gazette.

In the January issue of the *Edinburgh Medical Journal* my favorite friend, Dr. Ralph Stockman, contributes a paper in which he notes the value of camphoric acid in the treatment of night sweats, and quotes considerably from foreign literature on this subject in support of his own clinical experience.

The writer of this article has on several occasions in papers which have been published, and every year to his class of medical students, emphasized the value of this remedy as an antisudorfic. His first experience was in the wards of St. Agnes' Hospital during 1890-91, where he found, as Dr. Stockman has, that it controlled the sweats of tuberculosis in the great majority of cases and did not produce any disagreeable symptoms whatever, such as are usually caused by atropine or other powerful antisudorfics. He also in the first edition of his "Textbook of Practical Therapeutics," published in 1891, spoke of the value of this drug for the purpose, and in *The Medical News* of April 4, 1891, he contributes a paper in which he details two cases which have been markedly benefited by very moderate doses of the drug. He pointed out in this paper that twenty grains was usually quite sufficient to control the sweat, provided it was given early enough to be absorbed before the time of the sweat was reached; and he also pointed out, what other Continental observers had previously noted, that as much as sixty grains of this drug may be given without deleterious effect. A continued large employment of camphoric acid in the six years that has succeeded this report has still further confirmed his high opinion of this remedy; it will fail in some cases, but no remedy has been met with which in his hands so universally succeeds. It may be given in cachet, dissolved in whisky or brandy, or placed in dry powder upon the tongue and washed down with a little water or milk; but as it is slowly absorbed it should be given an hour or two before the time at which the sweat usually comes on. The writer has also found camphoric acid of great value in the treatment of idiopathic ptyalism as is sometimes met with in young children, as it controls the salivation without disordering the digestion.

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Topeka, Kansas, Saturday, May 1, 1897.

Isolation.

Dr. Edward Anderson in the *Maryland Medical Journal* takes up a very important side of this subject. He suggests that in addition to the sick with infectious diseases being separated from the well members of the family, when there are more than one sick they should be separated from each other. In our opinion this should be the rule in all cases when possible. There is a possibility of an infectious element in all forms of disease, and the progress of one case may be considerably influenced by the presence of another case in the same room.

Dr. Anderson mentions an instance where three cases of pneumonia followed each other in a family occupying one room. Possibly most practitioners have had similar experiences, but it well illustrates the doctor's point. There is another very important feature in the matter of isolation which seems to us to deserve more consideration than it often receives. In the majority of cases even when the sick are isolated they are confined to one room, and the possibility of proper ventillation or proper aeration of the room depends upon the condition of the patient and the external atmosphere.

We have always maintained that where possible two separate rooms should be assigned to each patient, especially those afflicted with infectious or contagious diseases. One room should be occupied at night while the other is thoroughly aired and fumigated, and this one should be occupied during the day while the sleeping room receives the benefit of the same process. The value of this regulation has been very thoroughly demonstrated in the treatment of consumption.

The subject of isolation should be considered in the benefit to those who may be associated with the sick, and also in the benefit which may accrue to the patient himself.

BOTEY recommends a combination of lactic acid and carbolic acid in glycerine for tuberculous laryngitis on the theory that there will be less irritation from the lactic acid, on account of the anesthetic effect of the carbolic acid.

KANSAS City, Mo., has a law which prohibits expectorating on street cars. How well it is enforced we are unable to say, but it is certainly a wise provision and should be respected.

The will of the late Dr. Pancoast bequeaths to the Medico-Chirurgical College of Philadelphia his museum of anatomy and surgery, and $600 per year with which to maintain it.

Announcement and Preliminary Program Kansas Medical Society.

The thirty-first annual meeting of the Kansas Medical Society will be held at Topeka, in Hamilton Hall, May 12, 13, and 14.

This meeting promises to be one of the best in the history of the Society. The changes which have been made in the plan of the session afford each attendant an opportunity to hear some of the best papers from each section. The program has been re-arranged by the committee and the papers distributed over the whole period. Some especially attractive features are on the program.

Railroad Rates—The railroads will give a one and one-third fare on the certificate plan. Be sure to get a certificate when you purchase your ticket and be sure to get all your friends coming to Topeka to do the same. There is no question but the rate will be secured.

Hotels—Topeka is noted for its excellent hotel accommodations. The National Hotel has been designated as official headquarters for the members of the Society. Rates, $2 per day.

PRELIMINARY PROGRAM.

[This program has been re-arranged by the committee, but we print it for convenience in sections.]

President's Address—F. M. Daily, Beloit.

Section on Medicine.

Croup and Its Treatment—G. W. Akers, Stafford.

Medical Electricity—W. S. Lindsay, Topeka.

Multiple Epithelioma—R. E. McVey, Topeka.

Sudden Deaths—W. F. Sawhill, Concordia.

Mitral Insufficiency—G. E. Cole, Girard.

Can Society Successfully Organize to Prevent Over-production of Defectives and Criminals?—B. D. Eastman, Topeka.

Typhoid Fever: Its Ætiology, pathology, and Treatment—P. Daugherty, Junction City.

Remarks on the Scleroses—B. E. Fryer, Kansas City, Mo.

Some of the Experimental Lesions of Diphtheria—J. L. Gilbert, Topeka.

Asepsis for the Country Practitioner—D. C. Tyler, Clifton.

The Child and the Physician—A. B. McCandless, Holton.

Some Neglected Non-Medicinal Agents in the Successful Treatment of Nervous and Mental Diseases—John Punton, Kansas City, Mo.

The Ounce of Prevention and the Pound of Cure—D. K. Longshore, Topeka.

A Paper—W. H. Porter—New York City.

Albuminuria of Pregnancy—S. S. Glasscock, Kansas City, Kas.

Typhoid Fever—N. J. Taylor, Berryton.

Cases from a Country Doctor's Diary—H. M. Ochiltree, Haddam.

Section of Ophthalmology and Rhinology.

The Pterygium—J. H. Thompson, Kansas City, Mo.

Granular Ophthalmia—A. C. Graves, Cherokee.

The Operable Heterophoria—B. E. Fryer, Kansas City, Mo.

The Influence of Nasal Catarrh on Subacute and Chronic Conjunctivitis—H. Z. Gill, Pittsburg.

Report of a Case of Rheumatic Irido Cyclitis—J. H. Johnson, Kansas City, Mo.

Mastoid Disease—L. Reynolds, Horton.

Report of Some Cases—J. E. Minney, Topeka.

Some Diseases of the Tonsil—W. E. McVey, Topeka.

Traumatic Keratitis—D. E. Esterly, Topeka.

Section of Surgery.

Ventral Fixation—J. T. Axtell, Newton.

Report of a Case of Brain Injury Received Thirty-three Years Ago—S. G. Stewart, Topeka.

Spermatocystitis—Geo. W. Davis, Kansas City, Mo.

(*a*) Report of a Case of Damage to the Male Urethra; (*b*) Report of a Case of the Complete Severing of the Tendo Achilles with Exhibit of the Result—S. E. Reynolds, Clay Center.

A Plea for Complete Pelvic Work—Wm. B. DeWees, Salina.

The Radical Cure of Inguinal Hernia—Maj. J. M. Banister, Surgeon U. S. Army, Ft. Leavenworth, Kas.

Report of Cases—Dr. J. H. Etheridge, Chicago.

The New Treatment of Sepsis—Emory Lanphear, St. Louis.

Operation for Double Hair-Lip—W. R. Priest, Concordia.

Section on Gynecology.

The Rational Treatment of Ovarian and Uterine Diseases—C. C. Seabrook, Burlingame.

Moveable Kidney—A. H. Cordier, Kansas City, Mo.

Perinorraphy—C. M. Holcomb, Winfield.

Is Gynecology a Narrow Specialty?—M. B. Ward, Topeka.

The Treatment of Tubercular Peritonitis Medically and Surgically Considered—J. W. Felty, Abilene.

Report of Cases—Ida C. Barnes, Topeka.

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SECTIONS.

Ophthalmology and Rhinology.

Chairman—J. W. May, Kansas City, Kas.
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Gynecology.

Chairman—H. H. Sutherland, Herington.
Secretary—O. J. Furst, Peabody.

Surgery.

Chairman—J. W. Felty, Abilene.
Secretary—W. F. Sawhill, Concordia.

Medicine.

Chairman—D. D. Wilson, Nortonville.
Secretary—J. W. Porter, Litchfield.

COMMITTEES.

Program—Peters, Ward, and McGuire.

Censors—Furst, Gray, Daugherty, Rodgers. and Tyler.

Necrology—J. W. Porter, B. J. Wetherby, and G. W. Hogeboom.

Arrangements — Fay, Munn, Magee, Barnes, and W. E. McVey.

The Acute Dyspepsia of Infancy.

Pediatrics.

Acute indigestion during the first few months of life is an affection which, as a rule, fails to receive the full meed of attention for which it calls. Its symptoms are regarded as of little or no importance; it is suggested that the child's food "is not agreeing with it," and the mother is reminded that in infants trifling derangements often induce alarming manifestations. This reassuring attitude, however, is often productive of grave harm to the invalid, and there can be no doubt that the mortality from gastro-enteritis would largely diminish if more attention were paid to the first signs of abnormality in the performance of the digestive functions. Of these signs a change in the color of the motions usually appears at the onset; the green color appears to be due simply to biliverdin, as the bacteria described by Lesage as causing it have eluded other observers. At the same time there is no doubt excessive microbic action, for the normal acidity of the feces is lost, and they may become quite strongly alkaline. Post mortem the green color is rarely seen as high up as the duodenum, and Heubner concludes that the affection begins as a chemical derangement of the contents of the jejunum and upper part of the ileum, a view which is supported by the fact that gastric symptoms do not appear till comparatively late in the disease. The next symptom is, in fact, an increase in the number and a diminution in the size of the green stools, and the presence of volatile fatty acids, which render them at the same time extremely malodorous and most irritating to

the skin. Peristalsis becomes more active, and is both irregular and painful, the child hence becomes restless and wakeful. The stomach is next affected, vomiting supervening with loss of appetite and often of weight, which in any case remains at best stationary. Then the stools become watery, the temperature rises, and unless remedial measures have been adopted, gastro-enteritis supervenes.

The radical treatment of this affection is rendered difficult by the fact that it commences in the most inaccessible part of the alimentary tract, namely, the small intestine. The first necessity, as Heubner well says, is to wash out the stomach, a procedure which, although it has been extensively employed abroad in the treatment of infantile dyspepsia since Epstein introduced it fourteen years ago, seems to have found but scant favor in England. It is easily done by means of a soft catheter, the child lying on its left side, on the nurse's knee, facing the operator and having the hips raised three or four inches above the level of the head. One or two ounces of 0.02 per cent. solution of resorcin or 0.05 per cent. solution of boracic acid are poured in through a funnel, the quantity varying with the size of the patient. The funnel is then depressed and washing continued till the fluid comes away clear; the sitting is concluded by the introduction of ½-1 drachm of castor oil through the tube. Should lavage be deemed unnecessary or inadvisable, Heubner recommends the administration of a powder containing ½-⅔ grain calomel and 15 grains magnesium carbonate every three hours until the characteristic greenish-gray stools begin to appear; one dose usually suffices; more than two or three are practically never required. The alimentary canal having thus been cleared out, the next step is to regulate the diet by striking out the food which is suspected to have been the cause of the symptoms. It is best, if possible, to rely entirely upon sterilized milk, but if this was the diet before the attack, some farinaceous food will now be indicated. Any of the better class of infants' foods may be given, but not boiled up with milk, which forms a mixture difficult of digestion. Heubner's plan is to take a tea to a tablespoonful of the food and to shake it up with cold water, subsequently boiling with a pint of water for a quarter of an hour. In very bad cases rice meal or arrowroot should be substituted for the prepared food, a tablespoonful or so of milk sugar being also added. Whatever form of nourishment is given should be carefully sterilized to prevent the growth of the milk bacteria in it. This diet produces brown, rather solid dejections; after it has been continued for three days, one may assume that the intestinal bacteria have been starved out, and that the time has come for cautiously recommencing with sterilized milk, which should be done by gradually stirring an increasing quantity into the gruel. Intestinal antiseptics are rarely of use, though Soltmann recommends resorcin, and Widowitz speaks very highly of naphthalene; if necessary, however, the acidity of the motions should be restored by the use of very dilute lactic acid (Lesage).

Acute dyspepsia is most difficult of treatment when it occurs in breast-babies under the age of three months, before which time farinaceous food is badly borne, either leaving the intestine unchanged or increasing the dyspepsia. A gruel made of ground arrowroot, maize or rice is, perhaps, less intolerable than other forms, but in many cases one is reduced to feeding the infant for a day, at least, on thin veal broth or egg water (the white of one egg with some milk sugar to two pints of boiled water). If this diet is properly assimilated it may be continued for a couple of days, the child then being put onto a mixture of a pint of cow's milk with two pints of five per cent. solution of milk sugar. In some instances peptonized or albumose milk may be given with advantage. Such is the treatment of a condition which, though of obscure origin, presents itself as a definite clinical entity, and although increasing knowledge may improve our insight into its pathology, it is hardly likely to subvert the rational basis of remedial measures based on experience and common sense.

Cardiac Arrhythmia in Children.

Medical Review.

O. Heubner's observations apply to the occurrence of cardiac arrhythmia in children excluding cases of organic heart disease and tubercular meningitis. Cases of poisoning often present arrhythmia. He has seen it in a child who has eaten stramonium seeds, and in a boy who was suffering from an attack of appendicitis, with an afebrile course, who was receiving large doses of opium. He has observed arrhythmia in cases of children suffering from heart disease who were taking digitalis.

It may be found in dyspeptic conditions dependent on intestinal auto-intoxication. In one such case the arrhythmia was only one symptom of a serious illness which was characterized by the occurrence of a train of nervous symptoms—rigidity of the neck, coma, vomiting, and fever. The illness ended after four days; and with the beginning of recovery large quantities of acetone were found in the urine. In a second case the auto-intoxication gave rise to arrhythmia and to severe nervous symptoms with convulsions. In this case actone was found in the urine.

Arrhythmia is also found in diseases of the abdominal organs, particularly those which are accompanied by vomiting, but in which auto-intoxication does not play a role; and in the course of the acute infectious diseases—more commonly during convalescence, seldom during the development or height of the disease.

Among those cases occurring during convalescence belong the familiar cases of diphtheria, which depend upon the action of the toxins upon the heart muscle. Arrhythmia is less common after scarlet fever, though it does occur even in cases which have run a mild course; in these it does not have the ominous significance it does when occurring after diphtheria. Arrhythmia after measles is of less significance than after scarlet fever. In the same category belongs those cases which occur after the crisis of croupous pneumonia and in typhoid fever. In anemic and nervous children without disease of the heart or brain, cases of cardiac arrhythmia easily mislead, and a false diagnosis of tubercular meningitis is not uncommonly made. Heubner alludes to palpitation of the heart and arrhythmia, which are said by some authors to occur in rapidly growing children before puberty. He has not enconntered such cases. Cardiac arrhythmia may be due to intestinal parasites, or it may be caused in a reflex manner—for example, emotional excitement, warm baths followed by cooling, and also during sleep. In idiopathic cardiac arrhythmia described by Da Costa the arrhythmia is the only symptom; it occurs in children from the third to the sixth year, it disappears during the febrile attack, and is augmented by deep inspiration.

In general it may be said that the cardiac arrhythmia of childhood is frequently transitory, and the treatment depends upon the cause which has brought the condition into existence.

Puerperal Fever in Private Practice.

Dr. Charles J. Cullingworth (*British Medical Journal*) in an address on the undiminished mortality from puerperal fever, and especially as it applies to private practice, says: It was not to be expected that those who had already been engaged for some time in practice would at once assimilate the new ideas and adopt what appeared to many of them not only new but revolutionary and unnecessary methods. But as time wore on and a younger race of men came upon the scene it was not unnaturally hoped that an improvement would take place, that a mortality which had been conclusively shown to be preventable would show some signs of diminution. How is it that this hope has not been realised? Either the profession is not convinced of the possibility of stamping out puerperal fever by the methods that have been proposed, or it has failed to carry out those methods with the thoroughness that can alone ensure success. As a responsible teacher of

midwifery, I have often asked myself the question how far the teaching is at fault. Do we teachers sufficiently impress upon the minds of our students the infinite importance of this subject? Are we ourselves careful to show by our own example the importance of the precautions that we lay down in the lecture theatre? Are we careful never to convey by thoughtless word or careless act the impression that the rigid adoption of antiseptic measures is excellent in theory, but does not after all matter so much in practice? If we are not, is it to be wondered at that when our students go out into the world, and are released from the discipline of the school and hospital that they should forget how much depends on attention to minute detail, and should discharge their conscience in this matter of antiseptics by pouring a few drops of carbolic acid or a drachm of tincture of iodine into the water in which they wash their hands, or by simply bidding the nurse administer a similarly prepared solution as a douche? I am not painting an imaginary picture. The methods at present employed by many who, if questioned, would be quite ready to proclaim their belief in antiseptics, and who assure one they have used "every antiseptic precaution," are often so crude and imperfect as to be a ludricrous travesty of genuine antiseptic midwifery.

The question I have just been asking, I ask of myself as well as others. It is clear that something is wrong. We shall be most likely to find out what that something is by a process of self-examination, both on the part of teacher and taught, however disagreeable that process may be. A great deal has been written on the superiority of asepsis as compared with antisepsis, and it has become the fashion in some quarters to speak of antiseptics as though they had had their day, and to maintain that a condition of asepsis can be attained by cleanliness alone. It is well, however, to bear in mind that the triumphs of our lying-in hospitals have all been won by the scrupulous use of antiseptics, and that sterilization, which is the essential element in aseptic surgery, is impossible in midwifery practice. When we have thoroughly washed our hands, as we all now recognize the necessity of doing before making an examination in the lying-in room, it costs very little trouble to adopt the additional safe-guard of immersing them for a moment or two in an antiseptic solution. And as a matter of experience those who are most diligent in the use of antiseptics are also the most diligent in carrying out all the details of elimentary cleanliness. I firmly believe that if the simple antiseptic precautions with which everyone is familiar were conscientiously adopted, puerperal fever would be as rare in private practice as it is now in the best lying-in hospitals. "The only way," as I have elsewhere observed, "to avoid (the present) terrible mortality, and to avoid also the terrible amount of puerperal disease, which because it is not fatal, is apt to remain unrecorded, is for every practitioner in midwifery to recognize his personal responsibility in the matter."

Recent Discoveries as to the Essential Fungus in Ringworm.

American Medico-Surgical Bulletin.

The discovery of the trichophyton was announced by Gruby in 1841. The class of fungus to which it belongs is still uncertain. Declaux and Leslie Roberts cultivated the trichophyton fungus outside the body, and the latter observer reproduced the original disease by inoculation. Sabourand, however, has made great advances in our knowledge of the subject within the last few years. He showed that the two chief varieties in man were a large spored (megalo-sporon) and a small spored (micro-sporon), the two never being found together on the same head. His conclusions may be stated as follows:

1. The small spored tinea fungus (microsporon Audouini) is by far the more common in children, being met with in two-thirds of the cases. The mycelium tubes grow in the substance of the hair, but the spores form a dense "mosaic" layer or sheath round its shaft. There are few spe-

cies of the micro-sporon, and with the exception of one found upon the horse, they are human parasites. It is the common fungus of the scalp ringworm, and is rebellious to treatment.

2. The large spored variety has many species, and is contracted by man from various lower animals, as the dog, horse, or cat. It is essentially the fungus of ringworm of the beard and of the smooth parts of the skin. As a general rule it is much more readily overcome by treatment than the small spored forms.

These researches, which proved the plurality of the ringworm fungi, have been extended by many observers. In England, Adamson has published a capital account of the work in that direction, which in the main confirms the conclusions of Sabourand. He finds, however, that the small spored variety is by far the more common in England, for it occurred in 273 out of 278 scalp cases, the remaining five being large spored. In the latter account he stated the proportion to be 95 per cent. in 263 consecutive cases. When cultivated outside the body in an artificial medium (Sabourand uses a peptone maltose agar-agar) the micro-sporon shows a downy surface and white color, whereas the megalo sporon has a powdery surface with branching rays and often a yellowish tint.

Notwithstanding these recent additions to our knowledge, no great advances have been made in treatment. The main difficulty of ringworm is a mechanical one, the fungus burrowing into the substance of the hair, as well as into the hair follicles and deeper layers of the epidermis, where it is beyond the reach of parasiticide remedies. A large-spored patch in the skin where the hair is rudimentary (lanugo), as at the back of the hand, may often be cured with a single application of tincture of iodine. In the same way a megalo-sporon patch on the scalp may be sometimes rapidly cured. But take a chronic ring on the head, where the hair has broken away, leaving only a scanty stubble of dark stumps, and one may paint on iodine day after day for a month with little effect. In the last-mentioned case the fungus has got into the roots of the hair and the deeper layers of the surface skin. In fact, to cure a chronic ringworm requires a large amount of resource, together with the utmost patience and thoroughness of treatment.

Considering the infectiveness of the fungus, and the ease with which its myriads of spores may be spread about, the wonder is that this pest of mankind is not far more universal.

The Dry Earth Closet.

B. C. Brett, M.D., in the Medical Age.

The substitute for the privy vault. For this I prefer the "dry earth closet." If this closet is to be a success, there must first of all be a plentiful supply of dry earth (or earth which will become dry) stored in the summer for the whole year. Loam is the best material, sand being for this purpose worthless. It should be stored in a dry place raised from the ground, and convenient to the privy. This storage must be as much a business in its season as the storage of ice in its season. The vault, if there is one, should be cleaned and filled with earth. The privy should open from the woodshed, or from some other outhouse, so as to be sheltered from wind and storm. The receptacle for excreta should be a strongly constructed box six feet long (or of length to conform to width of building), three and one-half feet wide at top and three feet at bottom; made of thick oak planks, sides, ends and bottom, with water-tight joints, spiked together, iron-bound, and its bottom fastened permanently to two runners on which it should rest when in place under the privy seat. It would be well to have two of these boxes, so that they might at each interval be exchanged. There should be no excavation of the ground beneath the privy. The box setting on level ground, supported on its runners, when nearly filled could easily be drawn away by chains attached to staples on the ends of the runners, and its contents buried in the soil or in the compost heap. The privy could well occupy

one corner of the shed at some farmhouses where there is no shed room to spare; that it should be made as warm and comfortable as possible goes without saying; in one corner of it should be stored in a box several bushels of dry earth before mentioned, and a shovel always there capable of taking up two quarts of this earth for deposit upon the excreta immediately after each evacuation. Enough earth should be used to prevent all odor and absorb the moisture, and if the earth is dry, less is required for this purpose than one would suppose.

Such a closet has been made to deposit the earth automatically, and it can be made so inoffensive as to be placed in any room as a common article of furniture. The dry-earth closet is no experiment; it has stood a fair trial in this and other countries, and when well and carefully managed has been found to be a great advance over the vault system.

"Malaria" and the Malarial Parasites.

In a paper on "The Diagnosis of Malarial Fever," read before the Medical Society of the County of New York, and published in *The Medical News*, Dr. William Osler gives an excellent *resume* of the knowledge now possessed regarding that disease. Three varieties of the hematozoon malariæ are distinguished: The tertian, which has a cycle of life of 48 hours and produces quotidian paroxysms if but one brood is present—tertian, is more than one; the quartan variety, which requires a period of 72 hours to mature and produces, if but one brood is present, a chill every fourth day, or oftener, if more than one. The third form is one of smaller size and difficult of recognition, being characterized by the occurrence of crescents and producing the irregular forms of malarial fever, the remittent, the continued and the pernicious. The quartan variety is of rare occurrence; in a series of 1,000 cases examined at Dr. Osler's clinic, only 15 were found to be of that type. He does not believe that the typhoid bacillus and the malarial hematozoon are often associated, indeed in 1,000 cases of malaria and 500 of typhoid fever, but one case showed evidence of double infection.

With regard to the tendency to diagnosticate various obscure conditions as malaria, he says as follows:

"North of Mason and Dixon's line physicians are prone to diagnose malaria for other diseases; south of the line they are more prone to diagnose other diseases for malaria; in both regions it is a source of greater errors in vital statistics than any other affection."

In this same line he says further:

"While I do not deny that in regions where malaria is endemic, and everybody comes under its influence, many obscure troubles follow in its train, I claim that the disease in the temperate regions of this country is well defined and easily recognizable, that north of the Chesapeake the fatal forms have become so rare that no health board should take a death certificate signed malaria without investigation."

In this vicinity, the place of malaria as a cause of death has given way, very largely, since Laveran's discovery has been generally accepted, to "Grip," which we firmly believe will likewise disappear from off the face of death certificates, when the bacterium of influenza shall be as easily demonstrable as the hematozoon of malaria now is.

Asexualization for Crime.

Leonard's Illustrated Medical Journal gives the following bill, which has been introduced in the legislature of Michigan, and has a fair chance to become a law:

Section 1. The people of the State of Michigan enact, That all persons inmates of the Michigan Home for the Feeble Minded and Epilectic, and all persons who shall hereafter become inmates of said Home for the Feeble Minded and Epileptic, that each and every person confined in said institution, and before he or she is discharged, shall be caused to submit to an operation that causes asexulization, that such persons shall cease to be able to reproduce their kind.

Sec. 2. All persons who shall have been convicted of a felony a third time, and so stated by the court, the first or second conviction having been committed in this State or some other State of the United States, upon conviction and sentence to a Michigan State prison, all of such persons so convicted and sentenced at a time prior to the expiration of such known third sentence, shall be caused to submit to an operation that causes asexualization and stops their ability to reproduce their kind.

Sec. 3. The superintendent, warden or other person having charge of such Home for the Feeble Minded and Epileptic, and such prisons as shall contain such persons as provided for in sections 1 and 2 of this act; the medical superintendent in charge of said institution shall perform or assist in the performance of the same any physician or surgeon of the State. The superintendent, warden or other person in charge of said institution may pay to each operator a sum not more than twenty-five dollars for each and every operation so performed; and in no case where the operation is performed by the physician employed regularly by the within named institution shall there be paid any extra compensation.

Sec. 4. In each and every case before such operation shall be performed, if the person be feeble minded or an epileptic confined within a prison in this State, the matter shall be presented in writing to the board of control of such institution, wherein it shall be shown that such operation would benefit the subject physically and morally, or that it is necessary as a restrictive measure to prevent propagation of any kind in case the subject is discharged from the institution. The board of control shall, after being satisfied of the advisability of such operation, authorize the medical superintendent to perform the same, after first giving notice in writing to the parents or guardians of such persons at least ten days before such operation.

Sec. 5. That whoever shall have been convicted of the crime of having ravished a child or woman while upon the streets of any city, village, public highway or any other place within this State, it shall be the duty of the judge making such sentence to include in such sentence that within one year after being confined in such prison, an operation which causes asexualization shall be performed as provided in sections 3 and 4 of this act.

Sec. 6. The penalty for non-compliance of this act shall be just cause for removal and forfeiture of the position of such superintendent, warden or other person named in this act.

Cyclic Albuminuria.

La Semaine Medicale.

Dr. Marie defines this disease as albuminuria occurring in apparently healthy subjects, being intermittent in its course and subject to certain conditions. The discovery of albumin may be accidental or the patient may suffer from general debility, heaviness of the limbs, palpitations, headaches, and hemorrhages. Healthy persons may have transitory albuminuria under certain conditions. Hwass found albumin in ninety-eight out of six hundred and thirty-five apparently healthy soldiers, the quantity of which was not influenced by exercise. Captian and Spiegler found albumin, probably from reflex causes, always present in one hundred cases of scabies.

This transitory must be distinguished from true cyclic albuminuria. It is doubtful whether cases which are influenced by food or cold are examples of this disease, or in perfectly typical cases they have often no effect. The cardinal symptom is that albumin is present only when the upright position is assumed, and vanishes when the patient lies or sits down, even when hard work is done on an exercise apparatus. In the case reported by the author, however, albumin appeared sometimes when the patient was in bed, at times of great annoyance or in stormy weather.

The quantity of albumin is always small. Its chemical composition varies with the individual and in the same individual at different times. Serum albumin, peptone,

propetone, nucleo-albumin, etc., have been found. The quantity of urine is not much affected. If at any time it is less than normal, there is said to be a corresponding increase in the albumin. The specific gravity varies, but is usually normal or higher (1.020 to 1.030).

Teissier gives the following cycle in this disease: (*a*) plus excretion of coloring matter, (*b*) albuminuria, (*c*) plus excretion of urates, (*d*) plus excretion of urea. Etiology: (1) Sex, more common in females. (2) Age, adolescence and early adult life. (3) Heredity, especially in children of gouty and arthritic parents (Teissier). (4) Disputed antecedents are renal affections, colds, overwork, and infective fevers.

The author states that he considers it to be a special morbid entity, probably depending on perverted functions of sympathetic nerves, and having a close anology to migraine. He does not agree with those who believe the cause to be a "minimal" organic renal lesion, as the almost indefinite time the disease can last without bad effects and its not being influenced by the quality of the food are against that theory. Casts are not generally present, but Marie does not consider that the presence of casts in small numbers indicates organic disease.

Erythema Nodosum of Syphilitic Origin.

Medicine.

Beurmann and Claude (*Annales de Dermatologie et de Syphiligraphie*) have observed a nodular erythematous eruption among syphilitics. One who has had occasion to see a large number of syphilitics will meet with cases of this kind from time to time, and will be very much puzzled to decide whether this eruption constitutes a feature of the syphilis or is an incurrent malady. Mauriac described such conditions and believed that they were of the same nature as early gumma. Bensiner, Duyon, Balzer, Barthelemy, Jullien, Vidal and Leloier, have also observed this, but do not regard them as syphilis. According to Beurmann and Claude this erythematous condition shows itself during the first months of the disease, but is also observed much later, concurrently with tertiary manifestations, or even without any other manifestations of the disease. It is found especially among the aged and debilitated, and in pregnant women. It consists of red or reddish nodules, usually situated upon the anterior surface of the lower limbs, sometimes on the upper, also upon the trunk, and rarely upon the face. They are usually rounded, sometimes as large as the palm of a hand, and are not painful and do not itch. As a rule they form an appreciable projection beyond the skin; at times can only be detected by grasping the skin between the fingers. They are frequently multiple, but sometimes only a few are present. They usually last fifteen days, and slowly disappear, by resorption. These nodules are most often distinct, but sometimes confluent, and thus form large indurated plaques, the induration extending into the subcutaneous cellular tissue. In appearance they are very much like the gumma, and they rarely ulcerate. The authors agree with Mauriac that all of these various papular, knotty, erythematous and subcutaneous eruptions of a gummatous nature are found together; but this lesion is always identical and differs only in the degree. Thus the erythema here spoken of is not an erythema nodosum on a syphilitic, but an erythematous condition which is part of the specific process. The authors also take into consideration the pathological and anatomical changes. It is not necessary to consider all of these lesions as being of syphilitic origin. The nodules in non-specific conditions are painful, while those in the syphilitic are not.

The treatment of this form of specific erythema nodosum is by the internal administration of iodides and of mercury. The ordinary erythema nodosum disappears in a few days, while the variety present in the syphilitic will remain for some time even if under treatment.

Wanted: To correspond with competent Physicians who desire a good location for the practice of medicine. Address with stamp, F. M. SHIPPEY, Waterloo, Iowa.